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ABSTRACT

This paper considers the implications for rhetorical studies of recent research and theory on hemispheric functions. After discussing differences between the functions of the right and left hemispheres of the brain, these differences are related to metaphor (which is seen as propositional in nature) and synecdoche (which is seen as appositional). Implications of these distinctions are drawn in terms of readers' approaches to texts, which can involve either informational reading or esthetic immersion. The notion of "presence" is discussed and related to appositional, right-brain functions. With regard to composition, it is noted that in immature writing there are traces of two quite different styles, one propositional and the other appositional. While the ability to carry on propositional thinking is seen as a sign of maturity, maturity in writing involves more: the ability to unite the appositional with the propositional in appropriate contexts. (AA)

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Brain and Rhetoric: An Exploratory Essay

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A Note on Method

This discussion calls upon the most reliable theories of brain function and uses the concensus of brain researchers for its conclusions and speculations. The reader must determine for him- or herself where conclusiveness ends and speculation begins, for I do not hesitate to use brain theory and research metaphorically, heuristically. The facts about the brain are accurate; in this paper, I often use them as speculative instruments.

And yet I think that alert readers will know perfectly well when the paper becomes highly speculative, for I have made every attempt to keep not only my audience but myself oriented. No small task, when one considers the drama and glamor of brain theory, the seductive possibility of using one finding about cognition or brain mechanism for much more than it is worth.

All in all, however, I have approached my materials with caution. I hope that my readers agree on two points: where I am relatively assured in my conclusions, I have good warrant for my certainty; when I am less assured, I have nonetheless pointed the way for future inquiry and research.

In the mid-nineteenth century, performing an autopsy on an aphasic, the French neurologist Paul Broca found massive damage to

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an area of the left cerebral cortex and concluded that this area--now identified with his name--was the speech center. It is indeed known to be one of the areas controlling speech.

Since Broca's discovery--and especially since the end of World War II--brain research has been pursued with increasingly dramatic results.[1] An ecumenical endeavor involving neurologists, neurosurgeons, biochemists, linguists, and psychologists (among others), brain science has, as the following pages will demonstrate, much to contribute to rhetoric, and, conversely, rhetoric has much to contribute to brain science. For example, in discussing the brain as a mechanism of language, A. R. Luria tells us that expression begins with a motive or general idea, while perception (decoding, understanding) ends with the interpretation of the motive lying behind the utterance.[2] That is to say, rhetoric is the Alpha and Omega of the brain's handling of speech, for rhetoric is, in large part, the study of motives.

However, I do not want to give the impression that brain research is meaningful to rhetoric only in the large, philosophic sense; its details help clarify many of the premises of rhetoric and even suggest pedagogical strategies.

By "rhetoric" in this discussion, I mean the generation, reception, and pragmatics of natural language and even more narrowly, reading and writing.

Left-Brain, Right-Brain

The rhetoricians' interest in the brain centers on hemisphericity, the different ways in which the left hemisphere (LH) and the right

hemisphere (RH) function.

LH controls the right hand, and RH controls the left hand. By and large, in right-handed people, language is a function of the LH, often called the "dominant hemisphere." "Localization" studies by such researchers as Wilder Penfield have resulted in "maps" like Figure 1.

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Figure 1 about here.

Figure 1 removed due to copyright restrictions. -- See note 3 for reference citation.

The two hemispheres of the brain are joined by the corpus callosum, a white sheet of axons or nerve fibers, which provides the communicative link between the two halves of the brain. If the corpus callosum is severed (through a surgical procedure known as commissurotomy), the left hand quite literally does not know what the right hand is doing. Obviously commissurotomized patients are a major source of knowledge about the functioning of the hemispheres.

As Figure 2 indicates, information from the left side of the visual field is transmitted to the RH, and information from the right side of the visual field is transmitted to the LH. Since language is, by and large, a function of the LH, if the left portion of the visual field is covered in a split-brain (commissurotomized) patient, only the RH receives information, and as a result, the patient cannot name items shown to him or her even though there is evidence that this patient knows what the items are. For instance, in the situation just described, a patient will be able to use a spoon properly, but

will not be able to name it.

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Figure 2 about here.

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While it is generally agreed that LH is the languaging side of the brain, the role of RH in regard to language is disputed. One study suggests that RH does have language, which is released when the control of the LH is weakened or removed, as in the case of massive injury to or removal of LH.[5]

An even more dramatic view of RH and language is provided by the study of three subjects, 9 and 10 years old, who had either RH or LH removed before five months of age. The study concludes the following: (1) both LH and RH are efficient in phonemic discrimination; (2) both LH and RH provide "an adequate substrate for semantic skills"; (3) LH is far better at syntax than RH. "What is the characteristic of the right hemispheric defect? It appears to be an organizational, analytical, syntactic, and hierarchic problem rather than a difficulty with the conceptual or semantic aspects of language."[6] In regard to LH, those adjectives have resonance: organizational, analytical, syntactic, hierarchic.

Perhaps the best-known terms for characterizing the hemispheres are Bogen's propositional (LH) and appositional (RH), in regard to which he hazards the generalization that "simultaneous patterns rather than sequential order distinguish appositionality from propositionality."[7] As we shall see, the terms "propositional" and "appositional" have

great meaning for the present discussion, implying as they do that LH is sequential, logical and that RH, on the other hand, works with an all-at-onceness, a-temporally and a-sequentially.

In this discussion, I will suggest that language use can be rated on a scale according to its degree of propositionality or appositionality. On the one hand, some language use approaches the pure propositionality of mathematics or symbolic logic; that is, it is structure almost without specific content. Other language use is almost purely appositional in the sense that idea after idea or image after image occur in a string of appositions, with no apparent propositional connection. At these extremes, language is, I think, Pathological, and indeed the best illustrations of what I mean come from the language of schizophrenics.

In a later section of this paper, we will return to my notions of propositional and appositional language, particularly in relation to the teaching of written composition.

Before I begin a more detailed characterization of the two hemispheres, I would like to introduce two generalizations that provide an intriguing background for what is to follow.

The first--advanced by Ten Houten--is that perceptions of LH relate to culture, those of RH to nature.[8] The implications of this are most intriguing, making us reconsider the "left-handed" wisdom of the natural human as opposed to the "right-handed" scientific thought of the child of culture. Indeed, Ten Houten and Kaplan deal with Tarot, I ching, and the teachings of Don Juan as examples of RH appositional (i.e., left-handed) thinking.

The second generalization is drawn from Ornstein.[9] As Kuhn points out, a paradigm is necessary for science to function, but at the same time, the paradigm limits, as did the Watsonian model in psychology. The complete psychology will take account of both the daytime (i.e., LH) and nighttime (i.e., RH) functions of the brain. Such is also the case for rhetoric, and this is one of the reasons that brain research is so important for our field.

To characterize RH, then. It is often called the "dark," "intuitive" side of the brain. In the normal right-handed person, either it has very little language or its language function is suppressed by the "dominant" LH. RH is superior at establishing part-whole relationships, that is, at gestalt formation or closure.[10] As will be seen, this idea is extremely important for rhetoric. For instance, with the left hand (which is controlled by RH), the split-brain patient is proficient at determining what a whole object will be on the basis of feeling one part of that object; from the part, the patient can infer or construct a gestalt. With the right hand, this is impossible.

As Bogen points out, perhaps its lack of the linear concept of time in ordering thought is the most important distinction between the two nodes. (This will be important to us when we consider reading.)

The RH emotes, learns, remembers, and initiates responses. It is superior in "managing spatial tasks."[11]

In sum,

> . . . it is evident that the right cerebral hemisphere makes an important contribution to human performance having functions complementary to those of the left hemisphere. The right side of the brain probably processes information differently from the left, relying more on

> imagery than on language, and being more synthetic and holistic than analytic and sequential in handling data. It is certainly important in perceiving spatial relationships. It is also probably the neural basis for our ability to take the fragmentary sensory information we receive, and construct from it a coherent concept of the spatial organization of the outside world--a sort of cognitive spatial map within which we plan our actions.[12]

If we think about the process of speech--which characterizes the LH--we begin to get a notion of how the LH must operate: ". . . what is essentially involved in language production is the programming of an idea, itself containing no intrinsic temporal order, into a sequence of linguistic units, which are also intrinsically unordered."[13] As Luria characterizes the process, first "the motive or general idea of the expression . . . is coded into a speech scheme and put into operation with the aid of internal speech; finally, these schemes are converted into narrative speech, based on a 'generative' grammar."[14] The temporal nature of these operations is illustrated by the fact that, in some cases at least, the speaker must choose or project a structure before selecting a lexical item, as in the following: <u>That she didn't recognize Jim surprised Mary</u>.

In sum,

> The left (dominant) hemisphere (in right handers) begins to play an essential role not only in the cerebral organization of speech, but also in the <u>cerebral organization of all higher forms of</u> cognitive activity connected with speech--perception organized into logical schemes, active verbal memory, logical thought--whereas the right (non-dominant) hemisphere either begins to play a subordinate role in cerebral organization of these processes or plays no part whatsoever in their course.[15]

I cannot resist ending this characterization of the hemispheres

with a paradox--which will seem a good deal less paradoxical as our discussion progresses. I have implied that the LH is the logical half of the brain, and that the RH works in images, a-logically. Now ponder Einstein's description of his own cognition:

> The words of the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as elements in thought are certain signs and more or less clear images which can be "voluntarily" reproduced and combined.[16]

As Nebes hints, perhaps the apparent inverse relationship between creativity and verbal skills could be due to the overtraining of verbal skills at the expense of nonverbal abilities.[17]

Right-Handed Metaphor and Left-Handed Synecdoche

In a paper that I co-authored with Timothy Crusius, one of my students,[18] we analyzed the nature of metaphor. As Christine Brooke-Rose[19] and Laurence Perrine,[20] among others, have pointed out, metaphor can have any of a great variety of grammatical forms. For example:

predicate nominal sentence

All the world's a stage. . . .

genitive construction

the bird of time

appositive

the black bat, night

vocative

O wild West Wind, thou breath of Autumn's being. . . .

deixis

Be watchful of your beauty, Lady dear!

How much hangs on that lamp, you cannot tell.

Indeed, metaphor may depend on context alone:

Eat, drink, and be merry, for tomorrow you die.

Which would not be metaphorical if uttered by a guard delivering the last meal to a condemned prisoner.

The metaphor, then, with its variety of grammatical forms, emerges through our knowledge of the world, and if I say "From Los Angeles, I sailed to New York in a great silver ship," your metaphorical interpretation of that statement will depend upon your knowledge of United States geography and modern transportation systems, though, of course, it is quite possible that I took a sailing ship through the Panama Canal or around the Cape.

Whatever its form, the metaphor is meaningless as metaphor unless, to use Richards' terms, we can identify its tenor and vehicle, which is to say, in fact, that all metaphors are somehow a vehicle predicated of a tenor, or, if you will, that all metaphors can be expressed as a predicate nominal sentence.

	Tenor	(is/are)	Vehicle
All the world's a stage.	world		stage
the Bird of Time	Time		bird
the black bat, night	night		black bat
O wild West Wind, thou breath of Autumn's being	wild West Wind		breath of Autumn's being
Be watchful of your beauty. . . that lamp. . . .	beauty		lamp

Eat, drink, and be merry. . . .	life	a day
Sheathe thy impatience.	impatience	sword
the tawny-hided desert crouches	desert	lion

I am not arguing, of course, that when we process language we go through the kind of transformation that I have illustrated, and specifically I am avoiding the argument over the nature of deep structure or whether it has any psychological reality. Quite obvicusly, however, metaphors are, to use Bogen's term, propositional in nature.

Not only are they propositional; they are verbal in a specific way.

Suppose I say to you, "Eat, drink, and be merry, for tomorrow you die." And suppose you ask me what I mean. I can propositionalize: "Well, I was only trying to tell you that 'life is but a day.'" Suppose further that you are still unsatisfied and ask me to clarify my meaning; I will tell you bluntly that I mean "life is short." With short, I will have arrived at an intermediate term, beyond which I can still go to make my meaning more explicit: Life is only a few hours in the sum of eternity; birth is like waking in the morn, and death is like going to sleep at night; in one day, there is time for few pleasures. . . .

Another example. A particularly obstreperous child says to me, "Oink, oink!"

"What do you mean by that?"

"I mean that you are a pig." [propositionalization]

"Why am I a pig?"

"Because you're unpleasant." [intermediate term]

"Why am I unpleasant?"

"Because you're greedy, rude, fat, smelly. . . ."

In both of these examples, we have seen that there are intermediate levels beyond which we can go in explanation of the metaphors and also that there are rockbottom levels beyond which we cannot go. The rockbottom level is the most specific level of explanation.

It is now perhaps apparent why I say that metaphor is a particularly verbal kind of figure. We explain metaphor by resorting to sets of terms, not to counter-images. (Shortly, we will be considering imagery, and we will see that explanations of images take place through the construction of counter-images; this difference in explanatory strategies clarifies the difference in function and effect between metaphor and image.) I believe that we always explain metaphor with rockbottom terms or with further metaphors, which in turn can be explained with rockbottom terms:

Eat, drink, and be merry, for tomorrow you die.

Birth is [like] waking in the morn, and death is [like] going to sleep at night.

Life is a day.

Life is short.

Enjoy yourself while you can.

(In this discussion, I ignore the difference between metaphor and simile.)

The particularly verbal nature of metaphor becomes clearer when we compare metaphor with image. One of the most famous of all imagist poems is this, by William Carlos Williams:

The Red Wheelbarrow[21]

so much depends
upon

a red wheel
barrow

glazed with rain
water

beside the white
chickens.

How do we begin to "explain" this image? To be sure, we can metaphorize it: red wheelbarrow (tenor) is purity, childhood, life, machine, etc. etc. (vehicle). However, such a reading of the poem of the poem is simply unwarranted, as our complete uncertainty about vehicle indicates. In the case of imagery, it seems that the poem should not mean, but be. And yet the poem does mean, but not in any metaphorical sense. Whereas metaphor in poetry is relatively easy to explain or "explicate," the image is elusive and difficult.

Take the first few lines of "Prufrock," for example. Ignoring certain "embedded" metaphors, we can see that these lines present an alternation metaphors and images:

Let us go then, you and I,

When the evening is spread out against the sky
Like a patient etherized upon a table; — metaphor

Let us go, through certain half-deserted streets,
The muttering retreats
Of restless nights in one-night cheap hotels — image
And sawdust restaurants with oyster-shells:

Streets that follow like a tedious argument
Of insidious intent — metaphor
To lead you to an overwhelming question . . .

Oh, do not ask, 'What is it?'
Let us go and make our visit.

In the room the women come and go
Talking of Michelangelo.[22] image

Note how relatively easy it is to explain the meaning of the metaphors. Since the evening is spread out against the sky like a patient etherized upon a table, the evening is passive, inert, in someone else's hands, sick, hovering between life and death, stifling. . . . But note also how difficult it is to explain the "meaning" of the images. "In the room the women come and go talking of Michelangelo"--but what does that mean?

In fact, I think, the only way for me to explain what that image means is to present counter-images and thus to construct a set of images, of which the original would be a part. The original image, then, would be a synecdoche, a part standing for the whole category that constituted the meaning of the one image for me.

My purpose here is to discuss the nature of poetry, not literary criticism, and yet I cannot resist an instructive and essentially relevant digression to illustrate my point about metaphorical versus synecdochic explication. Years ago, I read Yeats' account of the composition of "Leda and the Swan." As I recall, Yeats talked about getting so caught up with the image of the poem that nothing else mattered, and I think that the experience of the poem gives the reader something of the inexpressible--or at least inchoate--intensity of a painting of the same subject. Insofar as the poem "works," it does so as an image, not as a statement. But what can one say about an image? As we have seen, it is relatively easy to talk about metaphor, to explicate the metaphor in essentially metalinguistic terms. No metalanguage serves to clarify the image as image, however. (How would

one give a metalinguistic explication of "The Red Wheelbarrow"?)

It turns out, I think, that the need to explicate--whatever the source of that need--forces us to metaphorize the image, a result that in itself is neither good nor bad. For instance, here is Richard Ellmann on "Leda and the Swan":

> Could power and knowledge ever exist together in this world, or were they, as he [Yeats] had reason to suspect, contraries ever at war? Was wisdom the ripe fruit obtainable only when the sense of taste was gone?[23]

In this ingenious (and to me, at least, particularly rich) interpretation of the poem, Ellmann uses the gambit of metaphorization:

Zeus is power.

Leda is knowledge.

Rape is war.

I am hinting strongly, of course, that metaphor relates closely to what we know about the LH, that it is naturally easier to explain "meanings" in LH than in RH terms, and, finally, that explications which we might characterize as RH will sound naive, typically beginning with that sure clue to the affective "fallacy," "This reminds me of. . . ."

Let's think about images in poetry. One of the powers of metaphor, certainly, is that it propositionalizes imagistically (or usually does so): "night is a black bat," "the stars are the candles of the night," "life is but a walking shadow," "we devour our time like am'rous birds of prey," and so on. "Eat, drink, and be merry" is more powerful than its reduced propositionalized version ("life is a day") precisely because it is more imagistic in quality. But as we have seen, one of the

important characteristics of metaphor is its amenability to metalinguistic explanation.

What about the image, the "purity" of which is quite arbitrary and depends wholly on the reader in that any reader can metaphorize any image, as we have seen to be the case with both "The Red Wheelbarrow" and "Leda and the Swan." When the image is taken to be "pure," explication becomes difficult, if not impossible.

I want to use "Prufrock" as my example, for it is the first modern poem that I took seriously. In 1948 on the banks of the Truckee River in Reno, Nevada, I decided to make the first step toward overcoming my all-too-obvious philistinism: I would get to know Eliot. (Joyce was second on my agenda. Now twenty-nine years later, I realize that I have not reached my cultural goal and never will. Nonetheless.)

I began to read "Prufrock," resolving that I would understand its every word and then memorize the whole. The details of this experience--even the setting--still live vividly for me. With the first few lines, I gained a tremendous sense of power, for I could well understand the evening's being an etherized patient stretched out against the sky. I had words to express my understanding and sensed that I could argue cogently in favor of my interpretation.

Immediately, though, I was frustrated. How could I explain the full sense that I got from the images? (I did not yet have that term.) What did sawdust restaurants with oyster-shells "mean"? Even more puzzling: women in a room talking of Michelangelo? Of course, I resorted to a strategy that embarrassed me even then: "These passages remind me. . . . " The only way I could begin to express what had

happened to me in my reading was to give examples of similar scenes and events from my own experience. Even at the age of eighteen, I realized that such naive understanding was unacceptable--though I was not awfully precocious, and though I was a student at one of the most humble and practical state universities. I was stymied--in just the same way that most readers of poetry are stymied when they want to or are forced to discuss their experience of imagistic poetry.

We have not, I assure you, wandered from our purposes: to discuss LH and RH in the experience of reading poetry. We have seen that there is good reason to characterize metaphoric interpretation as LH, and there is equally good reason to characterize the interpretation of images as RH.

You will recall our characterization of RH thought as appositional, holistic, imagistic. There is good reason to believe that the RH power of imaging is necessary even for some kinds of propositional thought. For example, in solving problems involving certain kinds of disjunction, RH seems to be essential. In answering the following, LH seems adequate: "Jim is taller than Bill. Who is taller?" But in the following, experiments have shown that imaging seems necessary: "Jim is taller than Bill. Who is shorter?"[24] And, of course, if our logic follows, the metaphor (which propositionalizes images) must be bi-hemispheric while the image can be associated largely with the functions of the RH. (Does bi-hemisphericity explain the power of metaphor, which, Longinus tells us, simply sweeps us away and thus is the most rhetorically cogent of the figures?)

Particularly skilled at establishing part-whole relationships,

the RH is quite literally synecdochic in operation, synecdoche being the figure in which part stands for whole: All hands on deck! A fleet of twenty sails. I give my heart to you. (Metonymy is the figure in which something closely associated with the object term is substituted for the term: The crown commands. The pen is mightier than the sword. For our purposes, the distinction between synecdoche and metonymy, like that between metaphor and simile, is ignored.)

To understand the argument regarding images in poetry, one must understand the psychological concept of the cognitive category,[25] itself a metaphor that explains a perfectly obvious property of thought: the tendency of the mind to categorize, the necessity to do so. When a child first learns to recognize four-footed creatures, all quadrupeds are quite likely to be "doggies." Experience enables the child to make differentiations and thus establish new, refined categories: "moo-cows," "kitties," "horsies." The child--or adult--makes differentiations very rapidly, on the basis of one or two examples. When the child sees one "horsie" and differentiates it from "doggie," the new category is established, the one horse being a synecdoche, a part representing the whole category. For many freshman in college, a poem is a poem is a poem, but after a brief time in a literature class, the "poetry" becomes lyrics, narratives, sonnets, odes, etc. Thus, cognitive categories are hierarchical in arrangement and are created by and large through the observer's purpose.

In the experience of reading, an image is a synecdoche in just this sense: it is meaningful to the reader insofar as he or she can relate it to a set of like images, i.e., place it in a cognitive

category. For this reason, in its effect the image is likely to be highly personal, even idiosyncratic. A brain researcher, Sir John Eccles, states the idea this way:

> Our speculation has been extended to cover in principle the simplest aspects of imagination, imagery or the re-experiencing of images. In passing beyond this stage we may firstly consider a peculiar tendency to association of imagery, so that the experience of one image is evocative of other images, and these of still more and so on. When these images are of beauty and subtlety, blending in harmony and capable of being expressed in some language, verbal, musical or pictorial, so that transcendent experiences can be evoked in others, we have artistic creation of a simple or lyrical kind.[26]

While we might argue with the adjective "simple" in the above, certainly Eccles describes the lyrical experience.

All of this means, then, that a perfectly forthright explanation of the "meaning" of a poetic image is likely to be unacceptable in the academy, where the tradition demands "logical," impersonal explications.

In a brief essay, Roman Jakobson made suggestions that relate to my argument here.[27] He points out that aphasia suppresses either the ability to express similarity (metaphor) or the ability to express contiguity (metonym). It would seem, then, that metaphor or metonym (or synecdoche) are polar functions of language, even if they cannot be associated directly with LH and RH.

Another intriguing hint comes from a theory about the genesis of language. Jerison postulates that language evolved as a marking system, not as a system of communication.[28] Wolves and other predators mark their territory with urine, their highly developed olfactory sense

making this possible, whereas man, who has never had a highly developed olfactory system, signalled with sounds. In other words, language was first used to produce (evoke) images, and it still is so used. Whether or not Jerison is right--and we will never know--certainly the power of the image is mysterious and basic, felt in our right-handed, logical culture, but largely inexpressible because of our hemispheric bias.

According to the logic of this argument so far, the bilateral symmetry of the organ within our skulls--anatomical symmetry with complementarity of function--destines us for the poetic experience, both productive and receptive. If it turns out in fact that most people take no joy in poetry, find no real meaningfulness in it, we must look for a social influence of enormous power--enough to overcome "basic human nature," and we realize that even jails have not been successful at that.

I would suggest that we look at our right-handed schools, which both reflect and influence the development of our culture. In most literature classes--from the public schools through graduate seminars--it is impossible to respond to the synecdochic quality of poetry in the way that I have argued is necessary, using the LH-RH distinction at least as the analogical basis for my argument. The emphasis on explication de texte and the critical essay warps the total poetic experience and serves, I think, to alienate people from poetry.[29]

LH, RH, and Reading

What we know about brain function helps us understand the process

of reading. In the following, I will not cover territory already explored in standard sources, but will attempt to suggest new directions for inquiry and explain some of my own recent insights.[30]

First, I would like to point out some obvious, but generally unnoticed, characteristics of texts and the reading process.

Texts can be roughly categorized on the basis of their temporal organization and their poetic or non-poetic character. (For "temporal organization" we could substitute "appositional or propositional organization" or "lyric or non-lyric form.") Most novels and dramas, narrative poems, and other works take chronological sequence as their principle of organization. Lyric poems and some modern works of prose fiction and drama do not take chronological sequence as their organizing principle. Non-poetic works such as sets of instructions, journals, logs, and so on are chronologically organized. Non-poetic works such as collections of sayings, the larger structure of the present discussion, and other writings do not take chronological sequence as their organizing principle.

Recently, I encountered a perfect description of an a-temporal, non-poetic text. That description is well worth repeating:

> As I look back on the writing [of the book], I suppose that, stylistically, I was trying to weave a kind of seamless garment, and that that was necessary because the structure of what I was trying to reveal exists only as a whole, exists not as the sum of its elements, not by the simple addition of those elements, but rather through the simultaneous multiplication of every element by every other element. What I tried to evoke was a kind of synergism in which the structure in its irreducible wholeness is infinitely more than simply the sum of its parts, for, strictly speaking, considered as structure, a continuous

> system of differences, it has no parts, no independently meaningful, logically separable units. . . .
>
> At one point I simply had to ask myself if I thought that it was possible to present a holistic, simultaneous structure in the temporal, successive medium of written discourse. My answer was, "Of course not"--not if by "present" one meant "explain." But it seemed to me that I could come as close as possible to presenting that structure by trying to embody it in the structure of my own text. The model I used as a starting point for that attempt was the musical, motival structure of Levi-Strauss's The Raw and the Cooked. In order to achieve the multiple counterpointing effect that is the great strength of that method, I had to try to create within my text a kind of multidimensional imaginative space in which there existed the possibility of simultaneously placing every element side by side with every other element.[31]

In this connection one might also--with great trepidation--evoke Marshall McLuhan.

Diagrammatically, what I am saying works out like this:

	Temporal	A-Temporal
Poetic	novels dramas etc.	lyric poems some novels some dramas etc.
Non-Poetic	sets of instructions journals logs, etc.	collections of sayings essays etc.

The distinction between poetic and non-poetic writings is determined by the reader, a bald statement that could well be (and indeed has been) the subject of a long essay in itself. What I mean is simply that the poetic/non-poetic distinction is determined by the purpose

of the reader. I can read Heart of Darkness as a fiction (poetic), as a treatise on colonialism (non-poetic), as a document in the autobiography of Conrad (poetic or non-poetic).

Related to, but distinct from, the contrast between poetic and non-poetic writings is the nature of the reading experience itself.

In informational reading, the purpose is to learn something, to gain information, the reader always aware of context, the text relating to or having the potential of relating to something "out there" in the real world of concepts and ideas. It is the kind of reading that most reading theorists talk about: the efficient processing of a text for meaning, which is commonly defined as "the reduction of uncertainty."[32] I am suggesting that most reading theorists deal with the multiple experiences of reading as if they were intended solely for the purpose of gaining information about the world "out there."

But there is another world, the world of the possible, which is the root of the distinction that Northrop Frye makes between poetic and non-poetic texts. The poetic text delineates a possible world. The text that delineates an actual world is not poetic.[33]

I am not suggesting, of course, that the distinctions I outline are clearcut. Is a work such as In Cold Blood or even The Grapes of Wrath a delineation of a possible or an actual world? The answer, as I have said, lies in the purpose of the reader, but it is obvious that some texts, like The Grapes of Wrath, have more potential for being taken as non-poetic than do others, such as Vathek.

When the work is (taken as) poetic, the delineating of a possible world, the reading experience is quite different from that of the non-

poetic work in that the reading becomes solipsistic, the purpose being to immerse oneself, not to test the text against reality or to gain information. If there is such a phenomenon as informational reading on the one hand, there is also such an experience as esthetic immersion.

At the moment, I am reflecting on my own writing problem here. It seems to me that I need some way to "verify" the distinction I am making between informational reading and esthetic immersion. I need support--preferably in the form of unimpeachable authority--but I think there is no such "outside" support to be found in the scholarship of reading or of literary theory. The best authority is oneself, one's own experience of reading. In the experience of esthetic immersion, the ties with reality (with the "context," in Roman Jakobson's term) are either cut or suppressed. One lives more or less exclusively in the world of the work, and there are no "practical" consequences to the reading. Everyone who passionately reads poetry or fiction has had this experience.

But there is a paradox. Since we read with our minds, not our eyes, the text is meaningful only insofar as we can relate it to our own experience, and as we make this relation, we change the nature of our experience by expanding it, so that, through reading, we gain knowledge. Consider (with Kenneth Burke) Madame Bovary, a prime example from the naturalistic school. Flaubert has "displaced" the mythic underpinning of his tale to give it its lifelike quality. But

> The realistic writer soon finds that the requirements of literary form and plausible content always fight against each other. Just as the poetic metaphor is always a logical absurdity, so every inherited convention of plot in literature is more or less mad.[34]

As Burke points out, the novel is nothing more than a definition of the god-term of its title, Madame Bovary. Just as the poet displaces myth to give it credibility, verisimilitude, life-likeness, so the reader who is esthetically immersed displaces. The esthetic purpose of reading Madame Bovary is to define "Madame Bovary." Once that definition is made, the reader has a powerful tool for understanding reality; he or she is in command of the complex concept "Madame Bovary," which can be used to illuminate and deal with experience. In the reading, the naturalistic content is "displaced" to make way for the experience of the novel. For this reason, the most improbable possible world can be as real in the act of reading as the most probable. In esthetic immersion, Madame Bovary is no more real than one of Philip Jose Farmer's outrageous fictions. The more "real" the novel is to the reader, the less of a poem it becomes. The poem has a reality of its own. This reality is, of course, in the mind of the reader, a mythic reality.

Frye's outline of the process whereby we grasp the mythic reality of the fiction--the plotted poetic work--squares nicely with brain theory. When we read a fictional work,

> continuity is the center of our attention; our later memory, or what I call the possession of it, tends to become discontinuous [appositional]. Our attention shifts from the sequence of incidents to another focus: a sense of what the work of fiction was all about, or what criticism usually calls its theme. And we notice that as we go on to study and reread the work of fiction, we tend not to reconstruct the plot, but to become conscious of the theme, and to see all incidents as manifestations of it. Thus the incidents themselves tend to remain, in our critical study of the work, discontinuous [a-temporal], detached from one another and regrouped in a new way.[35]

The fiction becomes mythos and thus takes on the character of lyric.

Put into "brain" terms, Frye is describing the reading of fictions in this way. The images (RH) are perceived in their temporal sequence (LH). In retrospect, the sequentiality of the images disappears, and the work becomes a gestalt (RH). Any one of the images becomes a synecdoche (RH) for the whole. In discussing Moby Dick, for instance, any one of its synecdochic images, frequently the substance of one chapter, can become "the point of entry"--"The Candles," "The Try-Works," "The Doubloon." In this sense, the mythos of the fiction is analogous to the cognitive category.

The experience of reading should convince us that the most closely reasoned essays have the same organizational principle as fiction: the temporal, in that A must come before B in order for B to make sense, and B must come before C--though it is the case that few essays in my experience have this kind of tight logic, most writers not being of the nature of St. Thomas Aquinas. Once we have finished reading, we have the "meaning" or the equivalent of mythos, but seldom can we put the details of the argument together in a satisfactory fashion.

Other dynamics are working here, however. In writings based on temporal sequence, it should be the case that readers would attempt to "reduce" them to mythos or "meaning." One of my students has suggested, though, that there may well be--and probably are--readers who tend always to be reductive and others who tend always to be constructive. In her experiment, Judith Walcutt presented a variety of kinds of prose to readers: poems, recipes, sets of instructions, and so on. She revealed these texts to her subject readers in small increments,

in effect uncovering them virtually line by line. What she found is that some readers always tend to "reduce," to seek out the central mythos or meaning, while others construct their own possible worlds--poems, fictions, fantasies, speculations--on the basis of the individual segments of the text as they are revealed.

Reductive readers seem determined to make the sense out of the text; constructive readers seem to be triggered into their own creative processes by the synecdochic nature of the individual segments of the text. In our terms, reductive readers seem to be LH, while constructive readers seem to be RH.

So far we have been dealing primarily with those texts which are organized on the basis of what Kenneth Burke terms syllogistic progression.[36] Lyrics and other writings do not have such a structure. The sections of "The Waste Land," for example, could well be rearranged without affecting the integrity of the work as a whole.[37] Or compare Moby Dick with The Moonstone. To be sure, Moby Dick has a chronological organization based on the sequence of the voyage, but its organization is primarily lyric, the individual chapters being synecdochic for the whole.

We will return to the a-temporal (lyric, appositional) mode hereafter, but for the moment, I would like to relate our key terms--esthetic immersion and informational reading, temporal and a-temporal organization--more clearly to what we know about brain function.

Ordinary consciousness, Ornstein says, "involves analysis, a separation of oneself from other objects and organisms."[38] The experience of esthetic immersion in reading is, then, not ordinary consciousness,

but extraordinary. One does not analyze, does not "stand back" and achieve separation from the text. The informational reader must maintain contact with context, with the world "out there" which the text deals with; the text at every moment relates to context and, conversely, gives one access to context. Esthetic immersion, resulting from a willing suspension of disbelief, breaks that contact.

Esthetic immersion is a matter of attention. If I am reading a set of instructions for operating a new electric razor, the razor itself--"out there"--will be literally or figuratively before me; there will be an attention ratio between the set of instructions and their referent. But, as Frye points out, in poetic discourse there is no such ratio, poetic discourse constructing, by definition, only possible worlds, worlds, that is, of the imagination.

Attention is, to be sure, neurologically determined. "It is well known to psychologists that those features of the most elementary, involuntary attention of the type which is attracted by the most powerful or biologically significant stimuli can be observed very early on, during the first few months of the child's development."[39] Voluntary attention, however, "is not biological in its origins, but a social act . . . . it can be interpreted as the introduction of factors which are the product, not of the biological maturing of the organism, but of forms of activity created in the child during his relations with adults, into the organization of this complex regulation of selective mental activity."[40]

In Piaget's characterization of cognitive growth, one finds two parameters. First, the child discovers "otherness," that he or she

is separated from the world "out there," a process that begins almost at birth and is completed at about eight years. Second, the child develops the ability for operational and abstract thinking, The possibility of utilizing formal operations, which are completely abstract, conceptual tools. . . ."[41] The child begins to understand reality, gains the ability to use abstract thinking to deal with that reality, growing from the world of story to the world of science, developing the possibility of using reading as a tool for manipulating the world, i.e., the possibility of informational reading.

For the child, "Little Red Riding Hood" is an experience; for the adult, this myth can be regarded as an allegory concerning puberty and the onset of menstruation.[42] When the tale is used in an attempt to understand some facet of reality (of context), the reading is informational, not esthetic immersion.

Now, it is obvious that the development of cognition creates the possibility for using stories, particularly in Western societies, which are characterized as LH.[43] Crimes based upon fictions--cinematic, video, or prose--are only the most blatant examples. Nonetheless, the ability to experience stories--with wonder, intense curiosity about "what happens next," with terror, with absorption--remains always a possibility, though Western cognitive styles and, in particular, Western pedagogy tend to suppress and devalue this ability. After the experiences of reading, the adult also has the possibility of using the story as a cognitive instrument, a definition of a situation, the title or the name of a character becoming a tool of communication or a pivot for rational thought. During the experience of esthetic immersion, the story is

never an instrument; I would like, almost, to say that it is pre-rational.

Note well: I am not dichotomizing; I take account of both-and as well as either-or. Almost simultaneously, the story can be both myth and instrument for the reader, so infinitely complex is the experience of reading.

The story is temporal (LH), in medias res being the most apparent example. "Processing" a story must be very much like processing a sentence or other verbal sequence, which in surface form must be a spatial-temporal sequence, the events in the story, like the phonemes or graphemes in the sentence, coming one after another, both conveying meanings, which by definition are a-temporal. An analogy is the "deep structure" of a sentence, which has no linear or temporal dimension, so that both I smoke cigars and Cigars are smoked by me convey the same meaning in the sense that (a) predication and reference are the same and (b) roles are the same, i.e., in both versions we know that the same person is performing the same action with regard to the same thing. Any sensory array can be dealt with in two ways: serially (one at a time) or holistically. In reading, it appears that the RH processes data visuospatially, while the LH processes it verbally. "Thus, while the left hemisphere goes through and sequentially transforms each letter into an internal acoustic code (i.e., names them), the right hemisphere examines all the letters simultaneously looking for a variation in shape."[44] If the terms "event" or "scene" are substituted for "letter," this must pretty well describe the process of reading temporally organized works.

However, we must distinguish between process and experience, since

reading anything must involve somewhat the same process at one level. Even though reading a mystery by Dorothy Sayers (syllogistic progression) and a collection of poems by Adrienne Rich is based on the same "decoding" procedures, these procedures can be and usually are radically different in the larger sense--that is, we read the Sayers mystery from first page to last sequentially to get the meaning, but we can and probably do read the collection of poems in an almost random way. The experience of reading each may be immersion in the world of the possible, but there are differences, of course, for reading a murder mystery is not reading a series of poems. The similarity of the two experiences is in the connections that one does or does not make between the texts and the world "out there"--the immediate uses that one makes or does not make of the reading.

The best example of the a-temporal text is the lyric. (Not all lyrics are appositional in form since the completely appositional lyric can be rearranged significantly with no loss of "coherence.") Many lyrics--perhaps the best ones--simply evaporate when one attempts to explicate them, for they are experience, transmitted from poet to reader, near the subjective pole of the subjective-objective dichotomy. Eccles gives a spectrum of experience that illuminates the nature of the "pure" lyric.

> (a) The vision of an object. (The object can be touched, photographed, etc.)
>
> (b) A pin prick. (Can be seen by an observer; can be duplicated in an observer; observer can see the wince of pain and hear the cry.)
>
> (c) Ache or pain in a visceral organ. (Cannot be seen or duplicated, but can be generally described, even in a clinical sense.)

> (d) Mental pain or anguish. (Not a consequence of physical stimulation, but can achieve public status through descriptions and clinical reports.)
>
> (e) Dreams, memories [fantasies, etc.] (Gain public status through "the wealth of communication that there is between observers.")[45]

The subject matter of the lyric--dreams, memories, reveries, fantasies--is RH. The imagistic quality of lyrics is RH.

We can perform an experiment that will demonstrate the reading experience offered by the lyric--and again, I differentiate experience and process, for in process, the reading of a lyric might well be as sequential as reading a set of instructions (or, depending on one's strategies and reading habits, the set of instructions might be "attacked" as if the steps in their sequence were arranged appositionally, the holistic processing of serial displays being always a possibility). The inner process of reading a lyric, regardless of attack strategies, is quite different from the inner process of reading instructions.

Reprinted below is Lowell's "Colloquy in Black Rock." Read this poem in the following way: jump about from stanza to stanza, image to image, even word to word in a quite random way, until you feel that you "know" the poem. Then ask yourself the sense in which you know it. Ask yourself, further, how you might go about transmitting that knowledge to another; ask yourself, indeed, whether you have knowledge of the poem in any traditional sense, i.e., in any sense that would allow you to provide a conventional, logical explication de texte.

Colloquy in Black Rock

Here the jack hammer jobs into the ocean;
My heart, you race and stagger and demand
More blood-gangs for your nigger-brass percussions,
Till I, the stunned machine of your devotion,
Clanging upon this ymbal of a hand,
Am rattled screw and footloose. All discussions

End in the mud-flat detritus of death.
My heart, beat faster, faster. In Black Mud
Hungarian workmen give their blood
For the martyr Stephen, who was stoned to death.

Black Mud, a name to conjure with: O mud
For watermelons gutted to the crust,
Mud for the mole-tide harbor, mud for mouse,
Mud for the armored Diesel fishing tubs that thud
A year and a day to wind and tide; the dust
Is on this skipping heart that shakes my house,

House of our Savior who was hanged till death.
My heart, beat faster, faster. In Black Mud
Stephen the martyr was broken down to blood:
Our ransom is the rubble of his death.

Christ walks on the black water. In Black Mud
Darts the kingfisher. On Corpus Christi, heart,
Over the drum-beat of St. Stephen's choir
I hear him, Stupor Mundi, and the mud
Flies from his hunching wings and beak--my heart,
The blue kingfisher dives on you in fire.[46]

I posit that your experience of the poem can now be characterized something as follows: your "knowledge" consists of a series of images in apposition and a mood or emotion. I think, indeed, that the following equation is valid: images in apposition + mood or emotion that they engender = knowledge of the lyric. Our knowledge of the lyric is RH and thus difficult to express, unless we propositionalize, so that perhaps the only true "explication" of a lyric is another lyric.

A more superficial point can be made about "Colloquy in Black Rock": it offers many possibilities for rearrangement--but that, of course, is precisely the nature of apposition.

The power of the lyric is the experience that our right-handed civilization is organized to deprive us of. Which leads me to conclude with this from Eccles:

> Alternatively, entrancing displays of imagery that are reputed to be of great beauty and clarity can be experienced by ordinary people under the influence of hallucinogenic drugs such as mescaline or LSD. In parenthesis it should be noted that there are very few transmutations into literature or art of the transcendent esthetic experiences alleged to be enjoyed by drug addicts. One would suspect that in these conditions there would be an especial tendency for the formation of ever more complex and effectively interlocked patterns of neuronal activity involving large fractions of the cortical population of neurones. This would account for the withdrawal of the subject from ordinary activities during these absorbing experiences. Not unrelated to these states are the various psychoses where the inner experiences of the patients also cause them to be withdrawn.[47]

LH, RH, and Presence

One of the most important documents in "the new rhetoric" is The New Rhetoric: A Treatise on Argument, by Chaim Perelman and L. Olbrechts-Tyteca.[48] Among several key notions in the work is that of presence, methods of giving arguments status, vividness, and extralogical power.

Presence seems to have these characteristics. First, that object or concept to which one directs attention assumes thereby more presence than other objects or concepts. In other words, the act of attention endows presence. Second, the image creates presence. Third, presence is conferred by holism. Perelman says,

> Presence acts directly on our sensibility. As Piaget shows, it is a psychological datum operative already at the level of perception: when two things are set side by side, say a fixed standard and things of variable dimensions with which it is compared, the things on which the eye dwells, that which is best or most often seen, is, by that very circumstance, overestimated. . . . Certain masters of rhetoric, with a liking for quick results, advocate the use of concrete objects in order to move an audience. . . . It should also be observed that the effort to make something present to the consciousness can relate not only to real objects, but also to a judgment or an entire argumentative development. As far as possible, such an effort is directed to filling the whole field of consciousness with this presence so as to isolate it, as it were, from the hearer's overall mentality.[49]

And Perelman quotes Bacon:

> . . . The affection beholdeth merely the present; reason beholdeth the future and sum of time. And therefore the present filling the imagination more, reason is commonly vanquished; but after that force of eloquence and persuasion hath made things future and remote appear as present, then upon the revolt of the imagination reason prevaileth.

After reading Perelman, we have a fairly good sense of what presence consists in, and yet an exact specification eludes us.

Aristotle, of course, had the same intuitions about presence that Bacon, Perelman, and many others have had. Logical proofs, he tells us in the Rhetoric, are developed through deduction on the basis of the enthymeme or through induction on the basis of example. In rhetoric, of course, the example does not have the power of statistical validity--and yet, Aristotle and our experience tell us, it does have great power: the power of creating presence.

As you can well foresee, I am about to argue that presence in argument comes about largely throgh RH functions. I am referring to the synecdochic power of the example-image, with its ability to evoke

a cognitive category and to change that category by becoming a part of it. In this sense, the image not only creates presence by "triggering" the imaging power of the RH, but is also strictly dialectic, in that it adds to the available cognitive data of the perceiver.

We can postulate that the image affects cognition in at least two ways, first, by adding to and thus changing the category through enlargement, and, second, by triggering the creation of a new category. Paradoxically, the enlargement of a category always involves the creation of a new category due to hierarchical structure.

We can further postulate that some examples are confirmative, or discomfirmative, evoking in the reader (or hearer) that set of images, memories, and associations that represent an already existing category and thus creating presence, which results in adherence to or rejection of an idea through tacit demonstration that the subject under consideration is familiar. In this sense, they serve as the grounds for argument, and, as Perelman explains, argument can begin only on the basis of shared assumptions.[50]

Some examples are constructive, creating presence by triggering the construction of whole new cognitive categories in the reader or hearer and thus making whole new avenues of thought possible.

Some examples, of course, are misfires, neither confirming nor constructing either because they have not received attention or because they are so far outside the audience's experience that they cannot evoke or trigger the formation of a new set.

One function of style, assuredly, is to serve as an attention-getting device: inflection and emphasis in spoken discourse and

figures of grammar in written.

I would argue that, to a large extent, presence is the lyric component of argument. The purest deduction is an abstract set of statements which are relationally valid; the purest induction is a set of examples in apposition. Deduction is typically LH; induction is typically RH. Rhetoric--as Aristotle posited--must use both deduction and induction, for rhetorical situations and subject matter are both right-handed and left-handed.

This discussion of presence leaves me dissatisfied, uneasy, realizing as I do that it consists largely of hints and generalities when the topic assuredly deserves a more thorough handling. Yet I have decided not to omit this section, for I would hope my stumbles, misfires, and occasional insights will generate interest and further thought and research.

Brain, Creativity, and the Comp Class

It is a common experience in composition classes to find two diametrically opposed styles, the one which is highly general, the student writer never seeming able to get down to cases, and the other which is extremely specific and concrete, but chaotic, as if the writer is unable to order ideas and impressions, unable to establish the logical connections and hierarchies among them. In the one style, we have the ghost of coherence without the substance of tangible content; in the other, the cup of meaning runneth over.

The highly abstract but "coherent" style is propositional and the concrete style is appositional.

Some years ago, quite by chance, I found an article on schizophrenic language.[51] When I read the piece it occurred to me that the author, Brendan Maher, could well have been speaking of the more extreme cases of propositionality and appositionality that I had discovered in my composition classes. Here are two examples of schizophrenic language:

Propositional

> The subterfuge and the mistaken planned substitutions for that demanded American action can produce nothing but the general results of negative contention and the impractical results of misplacement, of mistaken purpose and unrighteous position, the impractical serviceabilities of unnecessary contradictions. For answers to this dilemma, consult Webster.

Appositional

> I hope to be home soon, very soon. I fancy chocolate eclairs, Doenuts. I want some doenuts, I do want some golden syrup, a tin of golden syrup or treacle, jam. . . . See the Committee about me coming home for Easter my twenty-fourth birthday. I hope all is well at home, how is Father getting on. Never mind there is hope, heaven will come, time heals all wounds, Rise again Glorious Greece and come to Hindoo Heavens, the Indian Heavens. The Dear old times will come back. We shall see Heaven and Glory yet, come everlasting life. I want a new writing pad of note paper. . . .

"Normal" students write themes that are only a shade less schizoid

than the passages quoted above. The following two themes are reproduced exactly as I received them, with all errors intact.

Propositional

Before a person can say whether the best things in life are free, he must first deturmine what in his opinion the best things are. Naturally every person has his own ideas concerning the objects or things that are important.

I believe that friendship, health, and beauty are three of the most important things a person can enjoy. When I say "beauty" I mean having things around you that you like or being places that make you feel good.

When I say that friendship is not fun, I don't mean that you can go out and buy five dollars worth of it when you need a friend. Instead of using money you use yourself. Your ideals and attitudes to buy friends. To fit into a group you must drop some and maybe most of your attitudes before you will be considered normal in the group. If you don't, you will be considered rebellious or off-beat and become an outcast from that group. Therefore, to have friends to to pay by changing yourself for their benefit.

Good health is very important to me because without it I can not enjoy myself. To maintain a healthy physical condition one must get the proper amounts of

exercise, food, and sleep. Exercise and sleep are free but food is by no means free. Every time one turns around he is paying for food by working at some type of job to get money for food.

Beauty is the only thing that comes close to being free. Aside from having to buy most of the articles that a person likes to have--such as a car, skiis or any other material object--beauty is mostly free. I love to go into the forest and enjoy nature's beauty. The trees, forest creatures, brooks and streams all mean a lot to me. I enjoy hunting and camping in the forest and just walking there alone, thinking to myself. But to keep these forests we must pay to see that some careless hunter or camper doesn't burn them down. We have to set aside parks and wilderness areas so they aren't cut into lumber by the mills. These parks all cost money. Everywhere you go, you have to pay some way or another.

Appositional

Are Motion Pictures Too Real?

"Film" Scene Is 'Too Real'"

Sav Paulo, Brazil (Reuters)--An assistant movie director shooting a Brazilian style western, fell dying with a rifle bullet in his back during a gunfight scene, Meridional News Agency reported here Wednesday.

Police halted film-making while they tried to find out who fired the fatal shot at Martino Martini as film extras blazed off blank ammunition.

So far there has been no explanation of how there came to be a live bullet among the blanks.

Martini was a talented young member of the "new wave" of Brazil's film industry. The film, "Obliged to Kill," was to be completed in 10 days' time."

Senta of Vienna

"Brunette Senta Berger of Vienna has lone been a glowing face in nondescript German movies. Last year fame took a leap across Europe and the world after she played the lusciously blonde German girl friend of a Russian soldier in the American-produced The Victors." I (Senta) was the aggressive girl in the film scenes. I stood out because when you're aggressive, audiences watch you." Senta also stood out, as mail from men everywhere proclamed, because she is full-faced, full-bosomed, full-hipped--a frankly full female."

"The 'Love Goddess' who never found love."--Marilyn Monroe

"Here (Miss Monroe) fans saw her pictures as reflections of her beauty, fame, fortune, and sex. They show the evolution of the Love Goddess in all her sexuality--the role that Marilyn knew and enjoyed and most feared to lose. First--and most famous--was

the 1949 nude calendar pose, which brought her a worldwide flood of welcome publicity while she was just a long-haired model who had had a few walk-on parts in the movies."

Elizabeth Taylor and Sophia Loren among the few, are too explicit in their acting on and off the scene.
Producers seem to put realism in front of morals and dignity.
The public wants more sex from female actresses, more realistic looking and sounding killings, etc.
The Walt Disney type program is fast becoming absolete.
Programs on the educational line seem to have died.
I want to go to a movie to be intertained by good acting, but moral conduct.
Now days, I walk away from a movie with a sick feeling in my stomach.
My feelings are caused by simpley vulgar intertainment.
Of course, there are a few good movies, such as Lorance of Arabia and others, but to the handfull that are acceptable in my terms, there are hundreds that are poor.
The producers' ought to put this realistic tought into good and moral acting.
Not this garbage that is turned out in mass production.

"Of Human Bondage"

"Some women can't help what they are..."
"There would always be men in her life...all kinds of men...and always Phillip to come back to...to degrade and despise."

As the billboard, a half naked woman!

The propositional and the appositional styles can be contrasted on the basis of these factors, among others:

Propositional	Appositional
Stated topic (enthymeme)	implied topic
Organization rigid	organization flexible
general examples, if any	specific examples
backgrounded style[52]	foregrounded style
little presence	great presence

Although the ability to carry on propositional thinking is undoubtedly a sign of maturity, maturity in writing involves the ability to unite the appositional with the propositional in appropriate contexts. Such is the implication of Aristotle's mention of inductive thinking and of the whole concept of presence. Such also, of course, is the implication of the poetic theory that this discussion elaborates. Of course, writing teachers have intuitively understood this point all along. The master comment on the propositional theme above would be, I suppose, "Get down to cases. Give me some concrete examples. Help me to see what you're talking about, to experience." The "master" comment on the appositional theme would be, "Get a thesis, state it or imply it clearly, and then organize and explore your ideas."

When we give such advice, we are quite literally asking students to change the ratios between their cerebral hemispheres.

> . . . it must be remembered that the absolute dominance of one (the left) hemisphere is not by any means always found, and the law of lateralization is only relative in character.

> According to recent investigations (Zangwill, 1960; Subirana, 1969), one-quarter of all persons are completely right-handed, and slightly more than one-third show marked dominance of the left hemisphere, whereas the rest are distinguished by relatively slight dominance of the left hemisphere, and in one-tenth of all cases the dominance of the left hemisphere is totally absent.[53]

Clearly, in the classroom we must take account of the fact that we will encounter instances of extreme LH or RH dominance, and I would postulate that in the example themes above, we have seen probable instances of such dominance. The situation becomes even more complicated when we realize that literacy may create or facilitate lateralization.[54] Learning to read and write may well increase the dominance of the LH.

Can we conclude, then, that the appositional writer may increase propositional skills through intensive practice in reading and writing? Such would seem to be the case. Are appositional writers in general less literate than propositional? At present, there is no answer to that question. In the absence of such evidence, I would suggest that carefully structured reading and writing exercises may well increase the versatility of the appositionalist.

As to the propositionalist, I can only suggest that intense exposure to the most appositional of all written discourse may well bring about greater versatility. I am speaking, of course, of the reading and writing of lyric poetry. However, the common method of "explaining" the lyric poem by propositionalizing all of its images should, according to my logic, tend to increase the propositional nature of writing. It would seem, then, that "reader response" criticism and free writing would be in order.

Finally, of course, the ultimate goal is to increase the creativity

of all writers--the ability to generate writings (whether poetic or non-poetic, temporal or a-temporal) that satisfy the writer's need for expression, the reader's need for understanding and empathy, and the world's need for meaningful communication. This creativity consists of the ability to use both propositional and appositional modes appropriately, and it comes about only in the proper environment.

Insofar as the composition classroom is an environment, it must be characterized by an atmosphere of freedom and writing tasks that are liberating. (Drills and exercises can be liberating at certain times for certain purposes with certain students.)

Carl Rogers defines creativity as " . . . the emergence in action of a novel relational product, growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life on the other."[55] The conditions that foster creativity are psychological safety ("Accepting the Individual as of unconditional worth. . . . Providing a climate in which external evaluation is absent. . . . Understanding empathically") and psychological freedom.[56]

In his magnificent book The Act of Creation,[57] Koestler adumbrates a model of the creative act. The creative person has been able to bisociate by leaping from one matrix to another. An excellent example of both matrix and leap is provided by Adams in Conceptual Blockbusting.[58]

At sunrise on the first morning, a monk laboriously climbs to the summit of a mountain, where he spends the rest of the day and all of the night meditating. At sunrise on the second day, he comes down the mountain on the same trail by which he ascended. Is there any time

in his journey downward at which he would be in exactly the same spot as he was on the journey upward?

If one stays in the verbal matrix, this is a difficult problem to solve, but if one leaps to the visual matrix, the solution becomes obvious. Picture the monk going upward and downward simultaneously. Obviously he would meet himself at some point on the trail.

Koestler sets up three categories of creativity: comedy, in which there is a collision of matrices; science, in which there is an integration of matrices; and art, in which matrices are juxtaposed. The comic effect comes about, for example, through the juxtaposition of the ridiculous with the sublime; Kepler analogized the role of the Father in the Trinity with that of the sun in the solar system, thus integrating two matrices; in tragedy, the matrix of the play is juxtaposed with the audience's knowledge that the play is just a play.

As there is matrix hopping, so there is hemisphere hopping; in fact, the two are apparently the same at times. Fluency in thought, like fluency in writing, is the ability to use both the appositional and the propositional, an ability that is very much like Ransom's description of metaphysical poetry (as opposed to physical and Platonic poetry):

> Platonic poetry is too idealistic, but physical poetry is too realistic, and realism is tedious and does not maintain interest. The poets therefore introduce the psychological device of the miracle. The predication which it permits is clean and quick but it is not a scientific predication. For scientific predication concludes an act of attention but miraculism [in the form of the metaphysical conceit] initiates one. It leaves us looking, marveling, and reveling in the thick dinglich substance that has just received its strange representation.[59]

The RH is the master of the appositional, dinglich, all-at-onceness of images; the LH is the master of metaphor, analogy, and proposition.

The fluent writer is a hemisphere hopper.

Conclusion

I have been asked to speak at a convention session, the general title for which is "Physiology and Rhetoric," the implication being, I suppose, that the rhetorician's interest in the brain is physiological. My impulse is to appear at the session in surgeon's garb--gown, cap, mask, and rubber gloves. If my sense of the ridiculous and my temerity hold, I may well do so.

But, of course, the rhetorician's concern is not with brain physiology and most assuredly not with cell structure and function. In fact, the rhetorician is not so much interested in brain as in mind.

Modern brain studies--as this discussion has tried to show--give us a new and unique understanding of mind, which must result in productive new directions for rhetorical theorizing, scholarship, and experimentation. If the paper stimulates that activity, it will have served its purpose.

[1]A brief and lucid account of this history is Steven Rose, "The Development of the Brain Sciences," The Conscious Brain (New York: Vintage, 1976), pp. 21-48.

[2]A. R. Luria, The Working Brain: An Introduction to Neuropsychology, trans. Basil Haigh (New York: Basic Books, 1973), pp. 306-7.

[3]Rose, p. 105.

[4]Luria, p. 108.

[5]Morris Moscovitch, "On the Representation of Language in the Right Hemisphere of Right-Handed People," Brain and Language, 3:1 (Jan. 1976), 47-71.

[6]Maureen Dennis and Harry A. Whitaker, "Language Acquisition Following Hemidecortication: Linguistic Superiority of the Left over the Right Hemisphere," Brain and Language, 3:3 (July 1976), 404-433.

[7]J. E. Bogen, "Some Educational Aspects of Hemispheric Specialization," UCLA Educator, 17:2 (Spring 1975), 27.

[8]Warren D. Ten Houten and Charles D. Kaplan, Science and Its Mirror Image (New York: Harper & Row, 1973), pp. 22-24.

[9]Robert E. Ornstein, The Psychology of Consciousness (New York: Penguin Books, 1975), p. 17.

[10]Bogen, p. 27.

[11]Michael S. Gazzaniga, "Reivew of the Split Brain," UCLA Educator, pp. 9-12.

[12]Robert D. Nebes, "Man's So-Called 'Minor' Hemisphere," UCLA Educator, pp. 13-16.

[13]Stephen D. Krashen, "The Left Hemisphere," UCLA Educator, pp. 17-23.

[14]Luria, p. 306.

[15]Ibid., p. 78.

[16]"Letter to Jacques Hadamard," The Creative Process, ed. Brewster Ghiselin (New York: New American Library, n.d.), p. 43.

[17]Nebes, p. 16.

[18]"The Apprehension of Metaphor," unpublished MS.

[19]Christine Brooke-Rose, A Grammar of Metaphor (Atlantic Highlands, N.J.: Hillary House, 1958).

[20]Laurence Perrine, "Four Forms of Metaphor," Contemporary Rhetoric: A Conceptual Background with Readings, ed. W. Ross Winterowd (New York: Harcourt Brace Jovanovich, 1975), pp. 319-37. This essay first appeared in the November 1971 issue of College English.

[21][Permission]

[22][Permission]

[23]I found this quotation written in the margin of my copy of Yeats, probably dating from about 1959. Apparently as long as 18 years ago I had begun to have intuitions about metaphor and image.

[24]Alfonso Caramazza, Joel Gordon, Edgar B. Zurif, and David de Luca, "Right Hemispheric Damage and Verbal Problem Solving Behavior," Brain and Language, 3:1 (Jan. 1976), 41-46.

[25]Frank Smith, "On Making Sense," Comprehension and Learning (New York: Holt, Rinehart and Winston, 1975), pp. 9-48.

[26]John C. Eccles, Facing Reality (Heidelberg and Berlin: Springer-Verlag, 1970), p. 57.

[27]Roman Jakobsen, "The Metaphoric and Metonymic Poles," Critical Theory Since Plato, ed. Hazard Adams (New York: Harcourt Brace Jovanovich, 1971).

[28]Harry J. Jerison, "Evolution of the Brain," UCLA Educator, pp. 1-8.

[29]This is much the same point that Keith Fort makes in his excellent essay "Form, Authority, and the Critical Essay," College English, 32 (March 1971), 629-39.

[30]For an overview of reading theory, I suggest Frank Smith, Understanding Reading (New York: Holt, Rinehart and Winston, 1971) and Eleanor J. Gibson and Harry Levin, The Psychology of Reading (Cambridge, Mass.: MIT, 1975).

[31]John T. Irwin, Doubling and Incest/Repetition and Revenge: A Speculative Reading of Faulkner (Baltimore: Johns Hopkins, 1975), pp. 6-7.

[32]Smith, Understanding Reading, pp. 35-38.

[33]This idea occurs again and again in Frye. See, for instance, "Nature and Homer," Fables of Identity (New York: Harcourt Brace Jovanovich, 1963).

[34]Northrop Frye, "Myth, Fiction, and Displacement," Fables of Identity, p. 36.

[35]Ibid., p. 23.

[36]Kenneth Burke, Counter-Statement (Los Altos, Cal,: Hermes, 1953), p. 124.

[37]See W. Ross Winterowd, "Beyond Style," Philosophy and Rhetoric, 5 (Spring 1972), 88-110.

[38]Ornstein, p. 61.

[39]Luria, p. 258.

[40]Ibid., p. 262.

[41]Rose, p. 200.

[42]I have encountered such an interpretation, though I cannot cite the source. The point is not so much that such an interpretation was made, but that it might well be made.

[43]Both Ten Houten and Kaplan and Ornstein discuss the problem of hemispherical dominance in whole societies.

[44]Nebes, p. 15.

[45]Eccles, pp. 52-53.

[46]Robert Lowell, Lord Weary's Castle and the Mills of the Kavanaughs ("Harvest" ed.; New York: Harcourt Brace Jovanovich, 1951), p. 11.

[47]Eccles, pp. 57-58.

[48]Trans. John Wilkinson and Purcell Weaver (Notre Dame: Notre Dame University, 1969).

[49]Perelman and Olbrechts-Tyteca, pp. 11-18.

[50]Ibid., pp. 65-114.

[51]Brendan A. Maher, "The Shattered Language of Schizophrenia," Psychology Today, 2:6 (Nov. 1968), 30-33. See also S. R. Rochester, J. R. Martin, and S. Thurson, "Thought-Process Disorder in Schizophrenia: The Listener's Task," Brain and Language, 4:1 (Jan. 1977), 95-114.

[52]To use the foregrounded style is "to represent phenomena in a fully externalized form, visible and palpable in all their parts, and completely fixed in spatial and temporal relations." "On the other hand [in the backgrounded style], the externalization of only so much of the phenomena as is necessary for the purposes of the narrative, all else left in obscurity; the decisive points of the narrative alone are emphasized, what lies between is nonexistent; time and place are undefined and call for interpretation; thoughts and feelings remain unexpressed, are only suggested by the silence and the fragmentary speakers; the whole, permeated with the most unrelieved suspense and directed toward a single goal (and to that extent far more of a unity) remains mysterious and 'fraught with background.'" Erich Auerbach, Mimesis: The Representation of Reality in Western Literature, trans. Willard R. Trask (Princeton: Princetone University, 1968), pp. 6; 11-12.

[53]Luria, pp. 78-79.

[54]Adam F. Wechsler, "Crossed Aphasia in an Illiterate Dextral," Brain and Language, 3:2 (April 1976), 164-72.

[55]Carl R. Rogers, "Toward a Theory of Creativity," Creativity and Its Cultivation, ed. Harold H. Anderson (New York: Harper & Row, 1959), p. 71.

[56]Ibid., pp. 78-80.

[57]Arthur Koestler, The Act of Creation (New York: Dell, 1967).

[58]James L. Adams, Conceptual Blockbusting: A Guide to Better Ideas (San Francisco: W. H. Freeman, 1974).

[59]John Crowe Ransom, "Poetry: A Note in Ontology," Critical Theory Since Plato, p. 880.